

ABSTRACT:

Please insert the accompanying new page 34 containing the Abstract from counterpart WO-A- 95/10918.

IN THE CLAIMS:

Please cancel, without prejudice or disclaimer, claims 91, 113, 114, 115, 116, 117 and 121.

Please amend the following claims:

F 1
86. (Amended) A data entry device for use in a data entry system, said data entry device comprising:
a reading sensor responsive to commands and/or sensed commands and data to produce input signals;
a controller coupled to said reading sensor to receive and process said input signals;
said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller; said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and
a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller;
wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a cellular telephone network interface and said wireless telecommunications network is a cellular telephone network, and wherein said controller is responsive to a said command to cause downloading of information from a remote processing center as required for updating information previously stored in said data entry device.

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87. (Amended) A data entry device for use in a data entry system, said data entry device comprising:
a reading sensor responsive to commands and/or sensed commands and data to produce input signals;
a controller coupled to said reading sensor to receive and process said input signals;
said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller;

said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and

a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller;

wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a cellular telephone network interface and said wireless telecommunications network is a cellular telephone network and said data entry device is integral with a cellular telephone, and wherein said controller is responsive to a said command to cause downloading of information from a remote processing center as required for updating information previously stored in said data entry device.

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88. (Amended) A data entry device for use in a data entry system, said data entry device comprising:

a reading sensor responsive to commands and/or sensed commands and data to produce input signals;

a controller coupled to said reading sensor to receive and process said input signals;

said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller; said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and

a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller;

wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a satellite interface and said wireless telecommunications network is a satellite telecommunications network, and wherein said controller is responsive to a said command to cause downloading of information from a remote processing center as required for updating information previously stored in said data entry device.

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#2 ³ 98. (Amended) A data entry device according to any of Claims ¹ 86, ² 87 or ³ 88, wherein a said reading sensor is a motion detector or a scanning device [such as a camera].

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#3 ³ 103. (Amended) A data entry device according to any of Claims ¹ 86, ² 87 or ³ 88 comprising rewritable storage and wherein programs in said data entry device are updateable remotely from a [said] processing center.

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111. (Amended) A data entry system comprising a hand holdable data entry unit, said hand holdable unit comprising:

a reading sensor for sensing commands and/or data and for producing input signals in response to said sensed commands and/or data;

rewritable storage programmable with information relating to a plurality of items, user selectable by means of said reading sensor;

a controller connected to receive and process said input signals from said sensor, said controller being arranged to respond to commands and/or sensed commands to control said hand holdable unit and to said data to select a said item; and

a display screen for displaying a user readable representation of said commands and said stored information for said selected item;

and said system further comprising:

a telecommunications interface for telephonic transmission of information relating to a selected item or items from said storage to a remote processing center via a telecommunications network and for telephonic reception of information relating to selectable items from said remote processing center to said storage via said telecommunications network, said controller being responsive to a said command to cause downloading of information from said remote processing center as required for updating information previously stored in said rewritable storage for one or more of said selectable items, wherein said hand holdable unit includes a speaker [and/or] and a microphone permitting said hand holdable unit to be used as a telephone handset.

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112. (Amended) A data entry system comprising a hand holdable data entry unit, said hand holdable unit comprising:

a reading sensor for sensing commands and/or data and for producing input signals in response to said sensed commands and/or data;

rewritable storage programmable with information relating to selectable items;

a controller connected to receive and process said input signals from said sensor, said controller being arranged to respond to commands and/or sensed commands to control said hand holdable unit and to said data to select a said item;

a display screen for displaying a user readable representation of said commands and said stored information for said selected item; and

a telecommunications interface for telephonic transmission of information relating to a selected item or items from said storage to a remote processing center via a telecommunications network and for telephonic reception of information relating to said selectable items from said remote

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 processing center to said storage via said telecommunications network, wherein said telecommunications interface is a telecommunications line interface integral to said hand holdable unit and directly connects said hand-holdable unit to said telecommunications network, and wherein said hand holdable unit includes a speaker [and/or] and a microphone permitting said hand holdable unit to be used as a telephone handset.

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~~119.~~ (Amended) A data entry system comprising a hand holdable data entry unit, said hand holdable unit comprising:

a reading sensor for sensing commands and/or data and for producing input signals in response to said sensed commands and/or data;

rewritable storage programmable with information relating to a plurality of items, user selectable by means of said reading sensor;

a controller connected to receive and process said input signals from said sensor, said controller being arranged to respond to commands and/or sensed commands to control said hand holdable unit and to said data to select a said item; and

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 a display screen for displaying a user readable representation of said commands and said stored information for said selected item;

and said system further comprising:

a telecommunications interface for telephonic transmission of information relating to a selected item or items from said storage to a remote processing center via a telecommunications network and for telephonic reception of information relating to selectable items from said remote processing center to said storage via said telecommunications network, said controller being responsive to either a said command or a said sensed command to cause downloading of information from said remote processing center as required for updating information previously stored in said rewritable storage for one or more of said selectable items, and wherein said system further comprises a carrier for a plurality of data and/or command codes for association with means for displaying a plurality of said selectable items, wherein said carrier carries a plurality of codes, each for a respective one of a plurality of natural language and/or numeric characters and a plurality of commands for controlling operation of said data entry system or a merchandising system, each code being associated with a visual representation of the corresponding natural language or numeric character or command and/or of a graphical representation thereof.

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~~120.~~ (Amended) A data entry system comprising a hand holdable data entry unit, said hand holdable unit comprising:

a reading sensor for sensing commands and/or data and for producing input signals in response to said sensed commands and/or data;

rewritable storage programmable with information relating to selectable items;

a controller connected to receive and process said input signals from said sensor, said controller being arranged to respond to commands and/or sensed commands to control said hand holdable unit and to said data to select a said item;

a display screen for displaying a user readable representation of said commands and said stored information for said selected item; and

a telecommunications interface for telephonic transmission of information relating to a selected item or items from said storage to a remote processing center via a telecommunications network and for telephonic reception of information relating to said selectable items from said remote processing center to said storage via said telecommunications network, wherein said telecommunications interface is a telecommunications line interface integral to said hand holdable unit and directly connects said hand-holdable unit to said telecommunications network, and wherein said data entry system further comprises a carrier for a plurality of data and/or command codes for association with means for displaying a plurality of said selectable items, wherein said carrier carries a plurality of codes, each for a respective one of a plurality of natural language and/or numeric characters and a plurality of commands for controlling operation of said data entry system or a merchandising system, each code being associated with a visual representation of the corresponding natural language or numeric character or command and/or of a graphical representation thereof.

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26 ~~123~~. (Amended) A data entry system according to [any of] Claim[s] ~~111~~, 113, 115, 117] or Claim ~~119~~ [or 121], wherein said telecommunications interface is integral to said hand holdable unit and directly connects said hand-holdable unit to said telecommunications network.

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27 ~~124~~. (Amended) A data entry system according to any of Claims ~~111~~, ~~112~~, [113, 114, 115, 116, 117,] ~~118~~, ~~119~~, ~~120~~, [121] or ~~122~~, wherein said hand holdable unit includes a rechargeable power source, means being provided for recharging said power source.

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27 ~~125~~. (Amended) A data entry system according to any of Claims ~~111~~, ~~112~~, ~~119~~, [] or ~~120~~, [121, or 122,] wherein said telecommunications interface is a wireless telecommunications network interface.

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27 ~~126~~. (Amended) A data entry system according to any of Claims ~~111~~, ~~112~~, [117, 118,] ~~119~~, ~~120~~, [121] or ~~122~~, wherein said telecommunications interface is a cellular telephone network interface.

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~~27~~ ²⁶ 127. (Amended) A data entry system according to any of Claims ~~111~~,
~~112~~, [117, 118,] ~~119~~, ~~120~~, 121] or ~~122~~, wherein said telecommunications
 interface is a satellite interface and said telecommunications network is a
 satellite telecommunications network.

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~~27~~ ²⁶ 128. (Amended) A data entry system according to any of Claims ~~111~~,
~~112~~, [113, 114, 115, 116, 117,] ~~118~~, ~~119~~, ~~120~~, 121] or ~~122~~, wherein said
 telecommunications interface includes a modem.

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~~27~~ ²⁶ 129. (Amended) A data entry system according to any of Claims ~~111~~,
~~112~~, [113, 114, 115, 116, 117,] ~~118~~, ~~119~~, ~~120~~, 121] or ~~122~~, wherein said hand
 holdable unit comprises one or two manually operable switches for scrolling
 said display in a first and/or second direction for selectively displaying
 information for respective selectable or selected items from said storage.

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~~27~~ ²⁶ 130. (Amended) A data entry system according to any of Claims ~~111~~,
~~112~~, [113, 114, 115, 116, 117,] ~~118~~, ~~119~~, ~~120~~, 121] or ~~122~~ wherein said hand
 holdable unit comprises one or two manually operable switches for scrolling
 said display in a first and/or second direction for selectively displaying
information for respective selectable or selected items from said storage, and
 wherein operation of said first and/or second switches in predetermined
 operational states of said hand holdable unit causes predetermined functions
 other than scrolling functions to be performed.

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~~27~~ ²⁶ 131. (Amended) A data entry system according to any of Claims ~~111~~,
~~112~~, [113, 114, 115, 116, 117,] ~~118~~, ~~119~~, ~~120~~, 121] or ~~122~~ wherein said display
 screen comprises a touch sensitive screen forming a said reading sensor, said
 controller being arranged to be responsive to a location at which said screen is
 touched for user input.

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~~27~~ ²⁶ 132. (Amended) A data entry system according to any of Claims 111,
 112, [113, 114, 115, 116, 117,] 118, 119, 120, 121] or 122 wherein a said reading
 sensor is for reading coded data such as fingerprints or signatures or written
 text, wherein said controller is arranged to access the stored information for
 selectable items to determine natural language characters or images
 corresponding to the coded data for display.

133. (Amended) A data entry system according to any of Claims 111, 112, [113, 114, 115, 116, 117,] 118, 119, 120[, 121] or 122 wherein a said reading sensor is for reading coded data such as fingerprints or signatures or written text, wherein said controller is arranged to access the stored information for selectable items to determine natural language characters or images corresponding to the coded data for display, and wherein said coded data comprises bar codes and/or binary dot codes and said sensor is a bar code and/or dot code reader.

134. (Amended) A data entry system according to any of Claims 111, 112, [113, 114, 115, 116, 117,] 118, 119, 120[, 121] or 122, wherein a said reading sensor is a motion detector or a scanning device such as a camera.

27 ⁴¹ 135. (Amended) A data entry system according to any of Claims ²⁶ 111, 112, [113, 114, 115, 116, 117,] ^{28 29 30 31} 118, 119, 120[, 121] or 122, wherein said controller is user programmable to cause captured data to be displayed on said display either in a first orientation suitable for reading displayed data when said hand holdable unit is held in a user's right hand, or in a second orientation suitable for reading displayed data when said hand holdable unit is held in a user's left hand, said controller being responsive to user programming operations including scanning of an appropriate command code using said reading sensor.

27 ⁴⁸ 136. (Amended) A data entry system according to any of Claims ²⁶ 111, 112, [113, 114, 115, 116, 117,] ^{28 29 30 31} 118, 119, 120[, 121] or 122, wherein said hand holdable unit is configured as an elongate unit such that it may be held by a user in the manner of a pen or quill with said reading sensor being located in a reading head at or adjacent to one end of said hand holdable unit.

27 ⁴⁹ 137. (Amended) A data entry system according to any of Claims ²⁶ 111, 112, [113, 114, 115, 116, 117,] ^{28 29 30 31} 118, 119 or 120, wherein said reading sensor is located in a reading head which is releasably attached to said hand holdable unit.

27 ⁵⁰ 138. (Amended) A data entry system according to any of Claims ²⁶ 111, 112, [113, 114, 115, 116, 117,] ^{28 29 30 31} 118, 119, 120[, 121] or 122, additionally comprising as well as or instead of said display screen, and separate from said hand holdable unit, means for displaying a selectable item with associated data sources for user selection of an item by operation of said hand holdable unit; and a remote processing center for processing user selections transmitted from said hand holdable unit.

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~~139.~~ (Amended) A data entry system according to any Claims ~~111, 112,~~ ^{26 27}
~~[113, 114, 115, 116, 117,] 118, 119, 120, 121]~~ ^{28 29 30 31} or ~~122,~~ wherein programs in said
hand holdable unit are updateable remotely from said processing center.

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~~140.~~ (Amended) A data entry system according to any of Claims ~~111,~~
~~112, [113, 114, 115, 116, 117,] 118, 119, 120, 121]~~ or ~~122,~~ comprising a
verification device in the form of a verification card or like carrier carrying a
verification code such as a bar code and/or dot code and/or any other
means for verification of user information.

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~~141.~~ (Amended) A data entry system according to any of Claims ~~111,~~
~~112, [113, 114, 115, 116, 117,] 118, 119, 120, 121]~~ or ~~122,~~ comprising a carrier,
such as a display, for a plurality of data and/or command codes for
association with means for displaying a plurality of selectable items, wherein
said carrier carries a plurality of codes, each for a respective one of a plurality
of natural language and/or numeric characters and a plurality of commands
for controlling operation of said data entry or merchandising system, each
code being associated with a visual representation of the corresponding
natural language or numeric character or command and/or of a graphical
representation thereof.

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~~142.~~ (Amended) A data entry system according to any of Claims ~~111,~~
~~112, [113, 114, 115, 116, 117,] 118, 119, 120, 121]~~ or ~~122,~~ comprising a carrier,
such as a display, for a plurality of data and/or command codes for
association with means for displaying a plurality of selectable items, wherein
said carrier carries a plurality of codes, each for a respective one of a plurality
of natural language and/or numeric characters and a plurality of commands
for controlling operation of said data entry or merchandising system, each
code being associated with a visual representation of the corresponding
natural language or numeric character or command and/or of a graphical
representation thereof, and wherein said codes are bar and/or dot codes
and/or other product identifications.

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²⁷ ~~143.~~ (Amended) A data entry system according to any of Claims ~~111,~~ ²⁶
~~112, [113, 114, 115, 116, 117,] 118, 119, 120, 121]~~ ^{28 29 30 31} or ~~122,~~ wherein a key on said
data entry unit can be used for entry of a said command and/or data.

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~~144.~~ (Amended) A merchandising system comprising a data entry ²⁹
 system according to any of Claims ~~111, 112, [113, 114, 115, 116, 117,] 118, 119,~~
³⁰ ~~120[, 121] or 122,~~ wherein:
 said selectable items are merchandisable items; and
 said remote processing center initiates processing of user orders of said
 selectable merchandisable items.

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~~145.~~ (Amended) A merchandising system comprising a data entry ²⁹
 system according to any of Claims ~~111, 112, [113, 114, 115, 116, 117,] 118, 119,~~
³⁰ ~~120[, 121] or 122,~~ additionally comprising as well as or instead of said display
 screen, and separate from said hand holdable unit means for displaying a
 selectable item with associated data sources for user selection of an item by
 operation of said hand holdable unit; and

a remote processing center for processing user selections transmitted
 from said hand holdable unit, wherein:

said selectable items are merchandisable items; and
 said remote processing center initiates processing of user orders of said
 selectable merchandisable items.

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~~146.~~ (Amended) A data entry system according to any of Claims ²⁷
~~[114, 116,] 118, 120 or 122,~~ wherein said controller is responsive to a said
 command to cause downloading of information from said remote processing
 center as required for updating information previously stored in said rewritable
 storage for one or more of said selectable items.

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~~147.~~ (Amended) A data entry system according to any of Claims [113,
 114, 115, 116, 117,] ~~118, 119, 120[, 121] or 122~~ wherein said hand holdable unit
 includes a speaker and/or microphone permitting said hand holdable unit to
 be used as a telephone handset.

Please add the following new claims:

[To follow Claim 98:]

¹³ ~~148.~~ A data entry device according to claim ¹² ~~98,~~ wherein said scanning
 device is a camera.

[To follow Claim 134:]

⁴⁵ ~~149.~~ A data entry device according to claim ⁴⁴ ~~134,~~ wherein said
 scanning device is a camera.

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150. A data entry device for use in a data entry system, said data entry device comprising:

a reading sensor responsive to commands and/or sensed commands and data to produce input signals;

a controller coupled to said reading sensor to receive and process said input signals;

said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller; said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and

a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller;

wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a cellular telephone network interface and said wireless telecommunications network is a cellular telephone network; and wherein said display screen comprises a touch sensitive screen forming said reading sensor, said controller being arranged to be responsive to a location at which said screen is touched for user input.

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151. A data entry device for use in a data entry system, said data entry device comprising:

a reading sensor responsive to commands and/or sensed commands and data to produce input signals;

a controller coupled to said reading sensor to receive and process said input signals;

said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller; said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and

a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller;

wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a cellular telephone network interface and said wireless telecommunications network is a cellular telephone network and said data entry device is integral with a cellular telephone; and wherein said display screen comprises a touch sensitive screen forming said reading sensor, said controller being arranged to be responsive to a location at which said screen is touched for user input.

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152. A data entry device for use in a data entry system, said data entry device comprising:

a reading sensor responsive to commands and/or sensed commands and data to produce input signals;

a controller coupled to said reading sensor to receive and process said input signals;

said controller coupled to a communications inter-face to selectively control transmission over said communications interface of command and/or data signals as determined by said input signals processed by said controller; said communications interface being operable directly to connect said data entry device to a wireless telecommunications network; and

a display coupled to said controller to display commands and/or information under control of said input signals processed by said controller; wherein said reading sensor, controller and display comprise a unitary assembly and said communications interface is a satellite interface and said wireless telecommunications network is a satellite telecommunications network; and wherein said display screen comprises a touch sensitive screen forming said reading sensor, said controller being arranged to be responsive to a location at which said screen is touched for user input.